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[Continued on next page]

**(54) Title:** POLYPEPTIDE PARTICIPATING IN PYRIDOXINE BIOSYNTHESIS, A POLYNUCLEOTIDE CODING THE POLYPEPTIDE AND THOSE USES

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At5g10410 -----MEG---TGVVAVYVNGALITEAK-KSPFSVVKVGLAQLRGGVIMDVVNAEQARIAEE 52
At2g38230 -----MAG---TGVVAVYVEGAMTETKQKSPFSVVKVGLAQLRGGVIMDVVNAEQARIAEE 53
At3g16050 MADQAQMTDQDQGAVTLYSGTAITDAKNHPSFSVVKVGLAQLRGGAIVEYSSVNAQKLAEE 60
snz3 -----MS-----EFKVKTLGLAQLKGGVIMDVVTPEQAI IER 33
snz4 -----MS-----EFKVKTLGLAQLKGGVIMDVVTPEQAI IER 33
snz1 -----MTG-----EDFKIKSGLAQLKGGVIMDVVTPEQAKIAEK 35

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At5g10410      AGACAVMALERVADIRAGGGVARMSPDQMIKEIKQAVTIPVMKARI GHFVEAQILEAI 112
At2g38230      AGACAVMALERVADIRAGGGVARMSPDPEIKENAVTIPVMKARI GHFVEAQILEAI 113
At3g16050      AGACSVTISD-----PVRSGGVRRMPDPIIVKEKVASVTPVMARVGHFVEAQITL 116
snz3           AGACAVMALERIPADMRKSGQVCRMSPDPMIKEIMAVSIPVMKVRIGHFVEAQITL 93
snz2           AGACAVMALERIPADMRKSGQVCRMSPDPMIKEIMAVSIPVMKVRIGHFVEAQITL 93
snz1           SCGACAVALEISIPADMRKSGQVCRMSPDKMIKDINMSVSPVMKVRIGHFVEAQITL 95
***:         :      *      *      *      *      *      *      *      *      *      *

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At5g10410	GIDYIDSESVLTADENHHKHNKFRIPFVCGCRNLGEALRRIREGAAMIRTKG-EAGTG	171
At2g38230	GVDDYDSESVLTADENHHKHNKFRIPFVCGCRNLGEALRRIREGAAMIRTKG-EAGTG	172
At3g16050	AVDYIDESRTISVADDDHINKHNKFRIPFCGRDTEGALRRIREGAAMIRTKGDLTATG	176
snz3	QVDYIDSESVLTADWTHIIKHNKFKVPFVCGAKDLGEALRRIREGAAMIRTKG-EAGTG	152
snz2	QVDYIDSESVLTADWTHIIKHNKFKVPFVCGAKDLGEALRRIREGAAMIRTKG-EAGTG	152
snz1	EVDYIDSESVLTADWTHIEKDKFKVPFVCGAKDLGEALRRIREGAAMIRTKG-EAGTG	154

At5g10410	NII EAVRHVRHSVYNGDIRVLRLN--MDDDEVFTVFAKKLAAPYDLVMQTKQLGRLPVVFQFAAG	229
At2g38230	NVVEAVRHVRHSVNGAARILLRS--MDDDEVFTVFAKKIASPYDLVQTKQMGRLPVPVFQFAG	230
At3g16050	NI AETVKNVRHSNGEIVRLN--MDDDEVFTVFAKKIASPYDLVQTKQMGRLPVPVFQFAG	234
snz3	DYSEAVKHITKIKAEIQYQYKENLTSTSDPAAKATELRVPVLLKTTLSSEGLPVMVNFAG	212
snz2	DYSEAVKHITKIKAEIQYQYKENLTSTSDPAAKATELRVPVLLKTTLSSEGLPVMVNFAG	212
snz1	DYSEAVKHIRITTEIKACQ--LKSEDDIAKVAEEMRPVPSLLKDLVLEKGLPVMVNFAG	213

AT5g10410	GVATPADAALMLQLGCDGVFVGSQIFKSSQDPARRAAIVQAVTHYSDPEMLVEVSCGLGE	289
AT2g38230	GVATPADAALMLQLGCDGVFVGSQIFKSSQDPARRAAIVQAVTHYSDPEMLVEVSCGLGE	290
ATc3g16050	GITTPADAALMLQLGCDGVFVGSQIFKSSQDPARRAAIVQAVTHYSDPEMLVEVSCGLGE	294
snz3	GVATPADAALLMQLGCGVFFVGSQIFKSSDPEKLACAVIATTHYDNPAKLLQVSSDLGD	272
snz2	GVATPADAALLMQLGCGVFFVGSQIFKSSDPEKLACAVIATTHYDNPAKLLQVSSDLGD	272
snz1	GVATPADAALLMQLGCDGVFVGSQIFKSSNPVRLATAVVEATTHFDNPSKLLVSSDGLGE	273

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At5g10410      AMVGILNLNDEKVERFANRSE----- 309
At2g38230      AMVGLNLDD-KVERFASRSE----- 309
At3g16050      AMESLNVRGDRIQDFGGGSV----- 314
snz3           LMGGISIQSINEAGGKNGARLSEIGW 298
snz2           LMGGISIQSINEAGGKNGARLSEIGW 298
snz1           LMGGVSIESISHAS--NGVRLSEIGW 297
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**(57) Abstract:** The present invention discloses a polypeptide participating in pyridoxine biosynthesis, a plynucleotide coding the polypeptide and those uses. Particularly, this present invention discloses a polypeptide participating in pyridoxine biosynthesis, a polynucleotide coding the polypeptide, a method for inducing plant growth inhibition, a method for screening a compound inducing plant growth inhibition, and composition for inducing plant growth inhibition which comprises the compound obtained by the screening method.



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